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EXAMINER

HOYE, MICHAEL W

ART UNIT	PAPER NUMBER
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2623

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/255,052	BOUCHER ET AL.	
	Examiner	Art Unit	
	Michael W. Hoyer	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 65-76 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 65-76 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicants' arguments filed on March 12, 2007 with respect to claims 65-76 have been considered but are moot in view of the new grounds of rejection.

Regarding previously amended independent claim 65, the Applicants argue on page 10 that, "Both Debey and Huizer, however, are devoid of any teaching or suggestion of multiplexing said selected presentation in MPEG digital video format with selectable presentations selected by other users into an MPEG digital video transport stream.

In response, the Examiner respectfully disagrees with the Applicants because the Debey reference teaches that the video-on-demand (VOD) system and more specifically the head end of the video system is designed to multiplex one or more video sources (or multiple streams) into a single stream of program optimization data to be broadcast over the transmission media and MPEG video compression may be used (see col. 13, line 50 – col. 14, lines 36). In addition to, the Huizer reference also teaches that a selected (VOD) television program is transmitted from the server 1 to STB 2 in the form of an MPEG Transport Stream TS (col. 4, lines 1-7). Huizer further discloses that, the transport stream comprises audio packets and video packets. Each packet comprises a header and a payload. The header comprises a Packet IDentifier (PID) which identifies whether the packet carries audio data or video data. The Transport Stream TS may comprise various television programs. A Program Map Table (PMT) is transmitted to indicate which PIDs constitute the relevant program (see col. 4, lines 25-49), and the PID of said control packets is associated with the relevant television program by means of the PMT described above

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(control packets associated with a different television program have a different PID) (col. 4 lines 59-63). Furthermore, Huizer discloses that the MPEG systems specification allows the order of packets having different PIDs in a Transport Stream to be changed. This will be the case if the network between server and STB comprises remultiplexers (see col. 5, line 51-col. 6, line 48). If multiple transport streams are combined into a single transport stream and/or remultiplexers are used as disclosed in Huizer, a multiplexer is clearly part of the system. Therefore, Huizer clearly teaches multiplexing a selected presentation (VOD) in MPEG digital video format with selectable presentations selected by other users into an MPEG digital video transport stream.

The Applicants further argue on page 10 that, “Moreover, both Debey and Huizer are devoid of any teaching or suggestion of receiving said address message at said addressable processing equipment at said user location to indicate the position of said selected presentation in MPEG digital video format in said MPEG digital video transport stream.”

In response, the Examiner respectfully disagrees with the Applicants because the Huizer reference clearly teaches receiving a Program Map Table to indicate which PIDs constitute the relevant program, as discussed above, as well as accommodating position labels in the audio and video packets themselves, where the position labels are accommodated in the adaptation field which the MPEG standard provides.

The Applicants present similar arguments with regard to previously amended independent claim 75, and the Examiner respectfully disagrees with the Applicants for the same reasons as presented above with respect to independent claim 65.

Claim Rejections - 35 USC § 103

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2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 65, 67 and 69-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alonso et al (USPN 6,184,878), in view of Debey (USPN 5,701,582), in further view of Huizer et al (USPN 6,751,802), all cited by the Examiner.

Regarding claim 65, Alonso discloses a system which provides interactive world wide web access using a set top terminal in a VOD system. Alonso discloses addressable processing equipment (40-1 through 40-n) at a user location (see Fig. 1 and col. 3, lines 11-14 and 42-45), the addressable processing equipment transmitting a request for a presentation is met by the requests for a VOD presentation, WWW presentation, information page presentation, menu presentation etc. (see col. 4, lines 36-40 and 48-53, col. 3, lines 16-20 and 37-40). Alonso further discloses a presentation preparation headend server 30 (Fig. 1), including a set top receiver 42 (Fig. 1) coupled to the headend for receiving a request for presentation. Alonso further discloses the headend converts HTML pages received over the Internet into MPEG 2 format (see col. 5, lines 1-12, col. 5, lines 61-66) using a HTML to MPEG compiler.

Although Alonso discloses providing a presentation to the appropriate subscriber (see col. 8, lines 49-53, col. 3, lines 40-45), Alonso does not explicitly disclose the claimed the presentation request including a destination address corresponding to said addressable processing equipment at said user location.

However, the DeBey reference specifically teaches that when a subscriber request is made and sent to the head end, the head end scheduling and routing computer receives the request and records the subscriber ID or address (see col. 10, lines 42-47). Therefore, it would have been obvious to one of ordinary skill in the art to have modified the Alonso reference to further include the teachings of the Debey reference for the advantages of ensuring that the requested material is transmitted to the appropriate subscriber, eliminating the need for the server to insert a terminal identification parameter, and for comparing ID's at the subscriber terminal resulting in reduced data transmitted over the network and further reducing costs, hardware and software associated with comparing ID's at the subscriber terminal. In addition to, it is notoriously well known to transmit a subscriber address upstream to a server to ensure the requested material is transmitted to the appropriate subscriber.

Alonso also discloses storing a plurality of web pages from web sites (see col. 6, lines 8-15) and thus discloses receiving a plurality of selectable presentations at the presentation preparation server. Alonso further discloses the MPEG converted presentation can be stored in video store memory 38 (Fig. 1, col. 5, lines 1-12, col. 6, lines 8-15). Regarding the claimed, "multiplexing said selected presentation in MPEG digital video format with selectable presentations selected by other users into an MPEG digital video transport stream", Alonso further discloses that computer 32/server 36 serve as a "MPEG packet multiplexer" (see col. 3, lines 42-59 and col. 5, lines 1-12 and 30-33). More specifically, Alonso discloses in col. 3, lines 42-59 that the Bleidt et al patent (US 5,671,377), which is incorporated by reference in its entirety, specifically teaches a digital information server 208 and a data multiplexing circuit 210 for use with a large number of users (see Fig. 2, col. 5, lines 40-49 and col. 6, lines 52-62 of

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Bleidt et al). Although, Alonso does not explicitly describe “multiplexing...selectable presentations...into an MPEG digital video transport stream”, another reference Huizer, teaches that a selected (VOD) television program is transmitted from the server 1 to STB 2 in the form of an MPEG Transport Stream TS (col. 4, lines 1-7). Huizer further discloses that, the transport stream comprises audio packets and video packets. Each packet comprises a header and a payload. The header comprises a Packet Identifier (PID) which identifies whether the packet carries audio data or video data. The Transport Stream TS may comprise various television programs. A Program Map Table (PMT) is transmitted to indicate which PIDs constitute the relevant program (see col. 4, lines 25-49), and the PID of said control packets is associated with the relevant television program by means of the PMT described above (control packets associated with a different television program have a different PID) (col. 4 lines 59-63). Furthermore, Huizer discloses that the MPEG systems specification allows the order of packets having different PIDs in a Transport Stream to be changed. This will be the case if the network between server and STB comprises remultiplexers (see col. 5, line 51-col. 6, line 48). If multiple transport streams are combined into a single transport stream and/or remultiplexers are used as disclosed in Huizer, a multiplexer is clearly part of the system. Therefore, Huizer clearly teaches multiplexing a selected presentation (VOD) in MPEG digital video format with selectable presentations selected by other users into an MPEG digital video transport stream, and it would have been obvious to one of ordinary skill in the art to have further combined the Alonso reference with the additional teachings of Huizer, as described above, for the advantage of reducing the amount of bandwidth required for multiple users to access selectable presentations over a transmission network through the use of the MPEG standard.

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Alonso further discloses the headend is coupled to the set top via a broadband cable or satellite network (see col. 3, lines 31-35) for transmitting the selected presentation to the addressable subscriber equipment at the user location. It is noted that the set top terminal inherently comprises an MPEG decoder for decoding the received MPEG streams (see col. 4, lines 8-17, col. 3, lines 20-40).

Alonso does not explicitly describe or disclose indicating the position of the selected presentation in the MPEG digital video format in the MPEG video transport stream.

However, in analogous art, the Huizer reference, as combined with Alonso above, further teaches receiving a Program Map Table to indicate which PIDs constitute the relevant program, as discussed above, as well as accommodating position labels in the audio and video packets themselves, where the position labels are accommodated in the adaptation field which the MPEG standard provides. In addition, Huizer discloses a VOD system which employs trick plays and teaches problems associated with trick plays in particular, "However, the non-linear playback of MPEG transport streams and program streams from video servers has not received the same level of attention. Non-linear playback involves the interruption and continuation of the stream and is necessary for basically all kinds of trick modes. Trick modes require an accurate control of the stream" (see col. 1, lines 40-46). Huizer further teaches, "In order to allow the receiver to flawlessly resume signal reproduction after a pause, position labels are inserted into the bit stream at positions where the server can resume transmission of the signal after an interruption" (see Abstract). Therefore, it would have been obvious to modify the VOD system of Alonso based on the teachings of Huizer to include the claimed "transmitting an addressable message to said addressable processing equipment at said user location to indicate the position of selected

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presentation in the MPEG digital video format in said MPEG video transport stream” for the benefit of correctly locating the transport stream packets, as well as enabling a trick play VOD system which flawlessly resumes the signal production.

As to claim 67, Alonso discloses an MPEG image (see col. 2, lines 33-43) and thus discloses the claimed limitation.

As to claim 69, Alonso discloses transmitting in the MPEG format and thus inherently discloses the claimed “wherein said selected presentation is MPEG digital video format is a group of pictures sequence including a least one MPEG I-frame and one or more MPEG P-frames forming a video sequence.”

As to claim 70, Alonso discloses an MPEG stream which inherently comprises I-frames, P-frames and B-frames.

As to claim 71, Alonso discloses the claimed audio (see col. 4, lines 15-17). It is noted that since the audio is transmitted via the MPEG format, Alonso discloses the claimed “MPEG encoded audio sequence”.

As to claim 72, the combination of Alonso, DeBey and Huizer discloses the claimed limitation, wherein Alonso, DeBey and Huizer disclose an MPEG transmission system and thus discloses the claimed limitations which are inherent in an MPEG system.

As to claim 73, Alonso discloses the claimed two-way broadband signal distribution network (see cols. 25-30).

As to claim 74, Alonso discloses sending the request over a tele-communications network (see col. 3, lines 35-37).

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4. Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alonso et al (USPN 6,184,878), in view of Debey (USPN 5,701,582), in further view of Huizer et al (USPN 6,751,802), as applied to the claims above, and further in view of LaJoie et al (USPN 5,850,218) and in further view of Banker et al (USPN 5,485,221), all cited by the Examiner.

As to claim 66, the combination of Alonso, DeBey and Huizer fails to disclose the claimed, “transmitting a log on request from said addressable processing equipment at said user location to said presentation preparation server.”

However, the LaJoie et al reference teaches an interactive video distribution system where some types of service may require more interaction by the set-top terminal, including requesting login information by the user to establish a session with the headend (see col. 17, lines 42-48). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Alonso, DeBey and Huizer to include the claimed transmitting a log on request for the benefit of providing a more secure system by restricting access to only authorized users.

The combination of Alonso, DeBey, Huizer and LaJoie fails to disclose the claimed receiving a user number from said presentation preparation server at the addressable processing equipment and using the user number to identify MPEG video signals transmitted from the presentation preparation server to said addressable processing equipment at said user location.

In analogous art, Banker teaches a subscription television system and terminal for enabling simultaneous display of multiple services. Banker teaches “Further, authorization information could be transmitted, this information would authorize the reception of channels or programs” (see col. 8, lines 4-7) and further teaches “On the other hand, data transmissions may

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be addressed transmissions.” Authorization data would normally be addressed to individual subscribers or groups of subscribers. That is, when transmitted, the data will have an address (for example, a subscriber terminal serial number) associated with it (see col. 8, lines 13-18). Banker is evidence it would have been well known to receive a user number from said presentation preparation server at the addressable processing equipment and using the user number to identify MPEG video signals transmitted from the presentation preparation server to said addressable processing equipment at said user location.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Alonso, DeBey, Huizer and LaJoie to include the claimed limitations for the benefit of providing a more secure system in which only authorized subscribers have access to their respective content.

5. Claim 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alonso et al (USPN 6,184,878), in view of Debey (USPN 5,701,582), in further view of Huizer et al (USPN 6,751,802), as applied to the claims above, and further in view of Hooper et al (USPN 5,422,674), all cited by the Examiner.

As to claim 68, the combination of Alonso, DeBey and Huizer fails to disclose the claimed wherein said selected presentation in MPEG digital video format is an MPEG P-frame forming a data overlay.

However, in related art, the Hooper et al reference teaches the use of MPEG P-frames for overlay images (see col. 7, lines 14-30). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Alonso,

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DeBey and Huizer to include the claimed limitation as taught by Hooper et al for the benefit of having simultaneous display of content while maximizing content space on the display for primary content using MPEG encoded compressed P-frames for image overlays.

6. Claims 75-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alonso et al (USPN 6,184,878), in view of Huizer et al (USPN 6,751,802), both previously cited by the Examiner.

Regarding claim 75, Alonso discloses a system which provides interactive world wide web access using a set top terminal in a VOD system. Alonso discloses addressable processing equipment (40-1 through 40-n) at a user location (see Fig. 1 and col. 3, lines 11-14 and 42-45), the addressable processing equipment transmitting a request for a presentation is met by the requests for a VOD presentation, WWW presentation, information page presentation, menu presentation etc. (see col. 4, lines 36-40 and 48-53, col. 3, lines 16-20 and 37-40). Alonso further discloses a presentation preparation headend server 30 (Fig. 1), including a receiver coupled to said addressable processing equipment at a user location (set top receiver 42 in Fig. 1) for receiving said request for a presentation. Alonso further discloses the claimed presentation conversion utility at said presentation preparation server for encoding said selectable presentations into MPEG digital video format as met by the headend converting HTML pages received over the Internet into MPEG 2 format (see col. 5, lines 1-12 and 61-66) using a HTML to MPEG compiler. Alonso further discloses the MPEG converted presentation can be stored in video store memory 38 (Fig. 1, col. 5, lines 1-12, col. 6, lines 8-15). Regarding the claimed, "MPEG packet multiplexer coupled to said presentation database memory, wherein said MPEG

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packet multiplexer multiplexes said requested presentation and other selectable presentations selected by other users in MPEG digital video format into an MPEG digital video transport stream”, Alonso further discloses that computer 32/server 36 serve as a “MPEG packet multiplexer” (see col. 3, lines 42-59 and col. 5, lines 1-12 and 30-33). More specifically, Alonso discloses in col. 3, lines 42-59 that the Bleidt et al patent (US 5,671,377), which is incorporated by reference in its entirety, specifically teaches a digital information server 208 and a data multiplexing circuit 210 for use with a large number of users (see Fig. 2, col. 5, lines 40-49 and col. 6, lines 52-62 of Bleidt et al). Although, Alonso does not explicitly describe “an MPEG packet multiplexer...wherein said MPEG packet multiplexer multiplexes...selectable presentations...into an MPEG digital video transport stream”, another reference Huizer, teaches that a selected (VOD) television program is transmitted from the server 1 to STB 2 in the form of an MPEG Transport Stream TS (col. 4, lines 1-7). Huizer further discloses that, the transport stream comprises audio packets and video packets. Each packet comprises a header and a payload. The header comprises a Packet IDentifier (PID) which identifies whether the packet carries audio data or video data. The Transport Stream TS may comprise various television programs. A Program Map Table (PMT) is transmitted to indicate which PIDs constitute the relevant program (see col. 4, lines 25-49), and the PID of said control packets is associated with the relevant television program by means of the PMT described above (control packets associated with a different television program have a different PID) (col. 4 lines 59-63). Furthermore, Huizer discloses that the MPEG systems specification allows the order of packets having different PIDs in a Transport Stream to be changed. This will be the case if the network between server and STB comprises remultiplexers (see col. 5, line 51-col. 6, line 48). If multiple

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transport streams are combined into a single transport stream and/or remultiplexers are used as disclosed in Huizer, a multiplexer is clearly part of the system. Therefore, Huizer clearly teaches multiplexing a selected presentation (VOD) in MPEG digital video format with selectable presentations selected by other users into an MPEG digital video transport stream, and it would have been obvious to one of ordinary skill in the art to have further combined the Alonso reference with the additional teachings of Huizer, as described above, for the advantage of reducing the amount of bandwidth required for multiple users to access selectable presentations over a transmission network through the use of the MPEG standard.

Alonso further discloses the headend is coupled to the set top via a broadband cable or satellite network (see col. 3, lines 31-35) for transmitting the selected presentation to the addressable subscriber equipment at the user location. Regarding the claimed, “wherein said addressable processing equipment decodes said selected presentation in MPEG digital video format for display to said user using an address message to indicate a position of said selected presentation in MPEG digital video format in said MPEG digital video stream”, it is noted that the set top terminal of Alonso inherently comprises and MPEG decoder for decoding the received MPEG streams (see col. 4, lines 8-17, col. 3, lines 20-40). However, Alonso fails to disclose indicating a position of the selected presentation in the MPEG digital video format in the MPEG video transport stream.

However, in analogous art, the Huizer reference, as combined with Alonso above, further teaches receiving a Program Map Table to indicate which PIDs constitute the relevant program, as discussed above, as well as accommodating position labels in the audio and video packets themselves, where the position labels are accommodated in the adaptation field which the MPEG

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standard provides. In addition, Huizer discloses a VOD system which employs trick plays and teaches problems associated with trick plays in particular, “However, the non-linear playback of MPEG transport streams and program streams from video servers has not received the same level of attention. Non-linear playback involves the interruption and continuation of the stream and is necessary for basically all kinds of trick modes. Trick modes require an accurate control of the stream” (see col. 1, lines 40-46). Huizer further teaches, “In order to allow the receiver to flawlessly resume signal reproduction after a pause, position labels are inserted into the bit stream at positions where the server can resume transmission of the signal after an interruption” (see Abstract). Therefore, it would have been obvious to modify the VOD system of Alonso based on the teachings of Huizer to include the claimed “to include the claimed “wherein said addressable processing equipment decodes said selected presentation in MPEG digital video format for display to said user using an address message to indicate a position of said selected presentation in MPEG digital video format in said MPEG digital video stream” for the benefit of correctly locating the transport stream packets, as well as enabling a trick play VOD system which flawlessly resumes the signal production.

Therefore, it would have been obvious to an artisan skilled in the art to modify Alonso based on the teachings of Huizer for the benefit of enabling a trick play VOD system which flawlessly resumes the signal reproduction.

Regarding claim 76, Alonso discloses the claimed URL (see Fig. 2).

Conclusion

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THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael W. Hoyer whose telephone number is **571-272-7346**. The examiner can normally be reached on Monday to Friday from 8:30 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached at **571-272-7353**.

Any response to this action should be mailed to:

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Effective January 14, 2005, except correspondence for Maintenance Fee payments, Deposit Account Replenishments (see 1.25(c)(4)), and Licensing and Review (see 37 CFR 5.1(c)

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and 5.2(c)), please address correspondence to be delivered by other delivery services (Federal Express (Fed Ex), UPS, DHL, Laser, Action, Purolater, etc.) as follows:

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is **571-272-2600**.

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Michael W. Hoyer
April 13, 2007


JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600